USER MANUAL

SAILOR®

SAILOR 6300 MF/HF Radiotelex

Thrane & Thrane

SAILOR 6300 MF/HF Radiotelex

User manual

Document number: 98-132519-B

Release date: October 27, 2011

Disclaimer

Any responsibility or liability for loss or damage in connection with the use of this product and the accompanying documentation is disclaimed by Thrane & Thrane. The information in this manual is provided for information purposes only, is subject to change without notice and may contain errors or inaccuracies.

Manuals issued by Thrane & Thrane are periodically revised and updated. Anyone relying on this information should acquire the most current version e.g. from thrane.com or from the distributor.

Thrane & Thrane is not responsible for the content or accuracy of any translations or reproductions, in whole or in part, of this manual from any other source.

Copyright

© 2011 Thrane & Thrane A/S. All rights reserved.

GPL notification

The software included in this product contains copyrighted software that is licensed under the GPL/LGPL. The verbatim licenses can be found online at:

http://www.gnu.org/licenses/old-licenses/gpl-2.0.html

http://www.gnu.org/licenses/old-licenses/lgpl-2.1.html

You may obtain the complete corresponding source code from us for a period of three years after our last shipment of this product, which will be no earlier than December 31, 2015, by sending a money order or check for DKK 50 to:

SW Technology/GPL Compliance,
Thrane & Thrane A/S,
Lundtoftegaardsvej 93D
2800 Lyngby
DENMARK

Please write "source for product SAILOR 6300 MF/HF Radiotelex" in the memo line of your payment.

You may also find a copy of the source at thrane.com/foss.

This offer is valid to anyone in receipt of this information.

Warranties

Any attempt to install or execute software not supplied by Thrane & Thrane on this device will result in the warranty being void. Any attempt to modify the software on this device in a way not specified by Thrane & Thrane will result in the warranty being void.

Trademark Acknowledgements

- **Thrane & Thrane** is a registered trademark of Thrane & Thrane A/S in the European Union and the United States.
- **SAILOR** is a registered trademark of Thrane & Thrane A/S in the European Union, the United States and other countries.
- Other product and company names mentioned in this manual may be trademarks or trade names of their respective owners.

Safety summary

The following general safety precautions must be observed during all phases of operation, service and repair of this equipment. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture and intended use of the equipment. Thrane & Thrane assumes no liability for the customer's failure to comply with these requirements.

GROUND THE EQUIPMENT
To minimise shock hazard, the equipment chassis and cabinet must be connected to an electrical ground and the cable instructions must be followed.

DO NOT OPERATE IN AN EXPLOSIVE ATMOSPHERE
Do not operate the equipment in the presence of flammable gases or fumes. Operation of any electrical equipment in such an environment constitutes a definite safety hazard.

KEEP AWAY FROM LIVE CIRCUITS
Operating personnel must not remove equipment covers. Component replacement and internal adjustment must be made by qualified maintenance personnel.

DO NOT SUBSTITUTE PARTS OR MODIFY EQUIPMENT
Because of the danger of introducing additional hazards, do not substitute parts or perform any unauthorized modification to the equipment.

COMPASS SAFE DISTANCE
Minimum compass safe distance: 1.3 m from the Message Terminal.

About the manual

Manual overview

This manual describes how to use the SAILOR 6300 MF/HF Radiotelex. Note that this manual does not cover installation of the system. For information on installation refer to the installation manuals [2] and [3] listed below.

This manual has the following chapters:

- ***Introduction*** contains an overview of the Radiotelex system.
- ***Using the system*** explains how to send Distress alerts and how to use the Radiotelex application for sending and receiving telex messages.
- ***Troubleshooting*** contains a short troubleshooting guide and explains how to check the status of the system.

Related documents

The below list shows the documents related to this manual and to the Radiotelex system.

Ref	Title and description	Document number
[1]	SAILOR 6300 MF/HF DSC, User manual	98-131070
[2]	SAILOR 6300 MF/HF DSC, Installation manual	98-130890
[3]	SAILOR 6006 and SAILOR 6007 Message Terminal, Installation manual	98-130088
[4]	SAILOR 6081 PSU and Charger, Installation and user manual	98-130980

Typography

In this manual, typography is used as indicated below:

Bold is used for the following purposes:

- To emphasize words or sentences.
  Example: “Do **not** push the Distress button if you are not in distress”.
- To indicate what the user should select in the user interface.
  Example: “Select **Message** > **Inbox**”.

Italic is used to emphasize the paragraph title in cross-references.

Example: “For further information, see *System overview* on page 2”.

Contents

Chapter 1 Introduction

System overview 2

The Radiotelex application 3

Chapter 2 Using the system

Before you start 6

Sending a DSC Distress alert 7

Sending a Distress telex 8

Cancelling a Distress alert 9

Overview of the Radiotelex user interface 10

Setting up a telex call 13

Making a telex call 16

Messages 23

Receiving telex messages 27

Scanning frequencies 28

Contacts - individual 33

Contacts - Coast stations 36

Contacts backup 41

System information 42

System settings 43

Power status 44

Chapter 3 Troubleshooting

Getting support 47

Generating a diagnostic report 48
Troubleshooting guide 49
Status signaling 51

Glossary 53

Index 57

Introduction

With the SAILOR 6300 MF/HF Radiotelex system you can send and receive telex messages and send DSC Distress alerts over MF/HF radio. The Radiotelex program runs on a SAILOR 6006 Message Terminal with a keyboard.

The Message Terminal is connected to a SAILOR 6300 MF/HF radio, which transmits and receives the telex messages and transmits DSC Distress alerts. The units are further described in the installation manuals for the MF/HF radio *[2]* and the Message Terminal *[3]*.

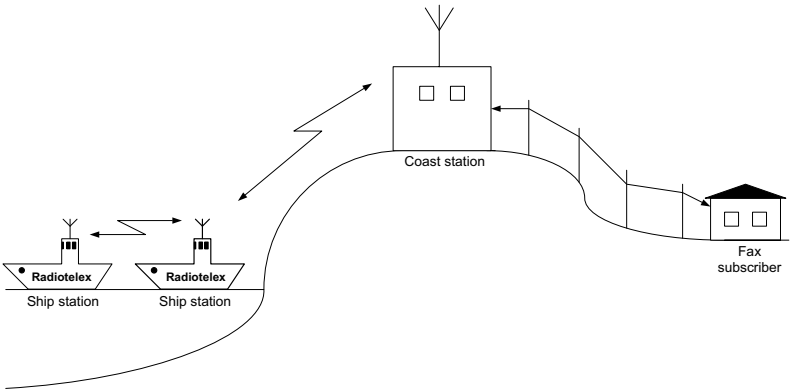
This chapter has the following sections:

- *System overview*
- *The Radiotelex application*

System overview

The SAILOR 6300 MF/HF Radiotelex communicates on MF or HF radio frequencies. It is approved for shipboard installations to operate within the Global Maritime Distress and Safety System (GMDSS).

Radiotelex supports worldwide ship-to-ship, ship-to-shore, and shore-to-ship communication. A coast station can act as a relay between the Radiotelex system and an end receiver without any telex capabilities. The Radiotelex system supports both 4- and 5-digit selective calls and 9-digit MMSI (Maritime Mobile Service Identity) numbers.



Radiotelex is well suited for transmission over very long distances. It has global coverage, even including the North pole and the South pole.

The Radiotelex application

The Radiotelex application runs on the SAILOR 6006 Message Terminal. On the Message Terminal you can read and write telex messages and set up telex calls.

The Message Terminal has a touch-screen and a keyboard for operating the Radiotelex system.

The Radiotelex application starts up automatically when the Message Terminal is powered. Note that the Message Terminal must always be powered in a GMDSS system.

For details on how to operate the system, see *Using the system* on page 5.

Using the system

This chapter describes how to operate the SAILOR 6300 MF/HF Radiotelex. It has the following sections:

- *Before you start*
- *Sending a DSC Distress alert*
- *Sending a Distress telex*
- *Cancelling a Distress alert*
- *Overview of the Radiotelex user interface*
- *Setting up a telex call*
- *Making a telex call*
- *Messages*
- *Receiving telex messages*
- *Scanning frequencies*
- *Contacts - individual*
- *Contacts - Coast stations*
- *Contacts backup*
- *System information*
- *System settings*
- *Power status*

Before you start

The SAILOR 6300 MF/HF Radiotelex system must be set up for telex. This involves the following steps:

At the time of installation

1. SAILOR 6006 is configurable to be either a mini-C GMDSS terminal or a Radiotelex terminal. At the first power-up you must set up the Message Terminal to be a Radiotelex terminal.
2. At first power up you must also configure the answer back string and the ID for your system. For further information, see the installation manual for the SAILOR 6300 MF/HF DSC *[2]*.
3. The MF/HF radio must be enabled to use telex. This is done by entering a PIN code in the MF/HF transceiver. For further information, see the installation manual for the SAILOR 6300 MF/HF DSC *[2]*.

Before use

1. The Message Terminal must be on.
2. The MF/HF radio must be in telex mode: On the MF/HF radio, push the **Mode** button repeatedly until the display shows TLX.

   For details, see the user manual for the SAILOR 6300 MF/HF DSC *[1]*.

Sending a DSC Distress alert

Important Only send a Distress alert if you are in immediate danger! The Distress alert can be compared to a MAYDAY call.

The Distress button procedure below is the same on the Message Terminal as on the SAILOR 6300 MF/HF DSC.

Note If the subsequent communication is to be telex, use the ALERT function in the MF/HF radio to set up telex subsequent communication before pushing the button. Refer to the SAILOR 6300 MF/HF DSC User manual for details on how to set up the MF/HF radio. When the DSC Distress alert is sent, a popup appears on the Message Terminal guiding you to the Call window, which is automatically set up to Broadcast FEC using the telex frequency matching the Distress alert.

To send a Distress alert, do as follows:

1. Open the cover for the Distress button.
2. Push and hold the button for more than 3 seconds to transmit an undesignated DSC Distress alert. While the button is pushed, the Message Terminal shows a popup with a countdown and the attached control unit(s) beep.

To cancel a Distress alert, see *Cancelling a Distress alert* on page 9.

Sending a Distress telex

If telex subsequent communication is selected for the DSC Distress alert, a popup appears and guides you to the Call window, which is automatically set up to Broadcast FEC on the Distress frequency assigned by the MF/HF radio.

You can now send a Distress telex as follows:

1. In the **Call setup** window, select

at the bottom of the window.
2. When the connection is established, type in further information about the distress. Press **Enter** or select **Send** after each line. Include the following information:
    - Distress alert sent at xx:xx (time of the Distress alert)
    - Own MMSI and name of the ship
    - Own position
    - Information about your distress
3. When the message is complete, select **Break** to end the message.

For further information on how to send a telex, see *Setting up a telex call* on page 13 and *Making a telex call* on page 16.

Cancelling a Distress alert

To cancel a Distress alert with telex subsequent communication, do as follows:

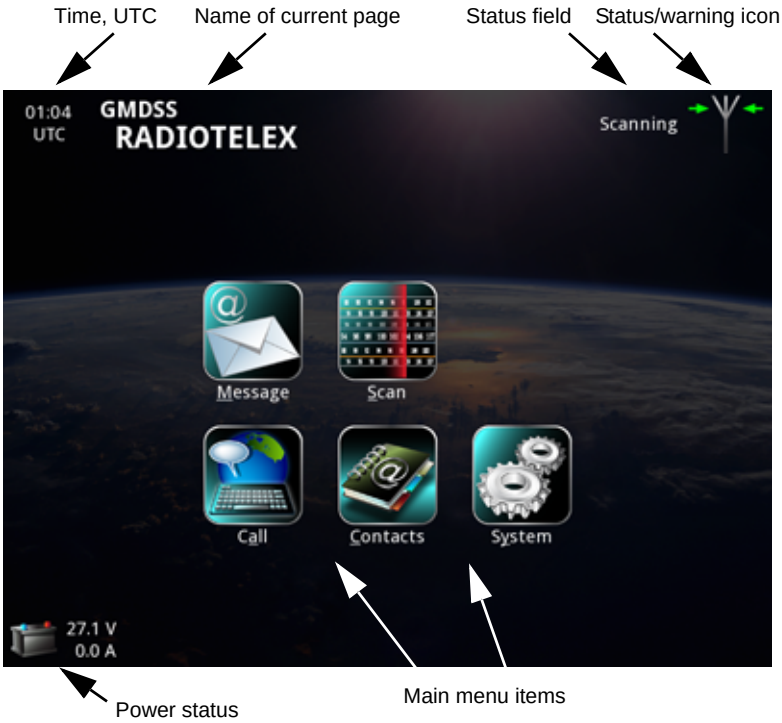
1. On the MF/HF radio, cancel the Distress alert by selecting the softkey **ANNUL**. For details, see the user manual for the SAILOR 6300 MF/HF DSC.
2. The radio sends a Distress cancel (on 1-6 channels).
3. The radio enters telex subsequent communication on the first telex distress frequency.
4. The Message Terminal shows that the system is engaged in DSC subsequent communication.
5. Select **Call** from the main menu.
6. In the **Call setup** window of the Message Terminal, select

to send a Broadcast FEC message cancelling the Distress alert. In the message, include as a minimum:
   - This is a Distress cancel for Distress alert sent at xx:xx (time of the Distress alert)
   - Own MMSI and name of the ship
   - Own position
   - The reason for cancelling the Distress alert
7. When the message is complete, select **Break** to end the message
8. On the MF/HF radio, press **OK** if more frequencies are involved, or **QUIT** to end the distress session if the whole procedure is completed.
9. If more frequencies are involved, the radio automatically switches to the next frequency. Repeat step 4 to step 8 for every frequency.

For further information on how to send a telex, see *Setting up a telex call* on page 13 and *Making a telex call* on page 16.

Overview of the Radiotelex user interface

When the system is powered, the Message Terminal display shows the main menu and a status field. Below is an overview of the main screen in the SAILOR 6300 MF/HF Radiotelex.



- **Time, UTC:** The time of day, Universal Time Coordinated (received from the GPS input of the MF/HF radio system).
- **Name of current page:** When you have entered a subpage, this field shows the name of the page.
- **Status field:** This field shows a short status message next to the Status/warning icon.

- **Status/Warning icon:** This icon can show:

  System is idle.

  System is scanning the frequencies selected in the scan list.

  ARQ connection.

  Outgoing selective FEC.

  Incoming FEC (selective or broadcast).

  Outgoing Broadcast FEC.

  Red arrows instead of green arrows in the above icons mean that the signal quality is poor.

  Together with each of these symbols one of the following icons may also appear:

  Error.

  Warning.

  For details of warnings/errors, see *Information of events* on page 51.

- **Power status:** Shows the status of the backup battery.
- **Main menu items:** Select these items to access the subpages.

Navigating the Radiotelex

To navigate and select items, you can do one of the following:

Touch screen: Select items by touching them with your finger on the screen.

Keyboard:

- When an item has an underlined letter, you may type **Alt + <letter>** to select the item, e.g. type **Alt+S** to select the Scan menu.
- Press **Esc** to go back one level in the menu system or to close the current window.
- Use the **tab** and **arrow** keys to navigate through items.
- Press **Space** to select items.
- Press **F1** to see the list of active errors and warnings.

Trackball (if fitted):

- Use the trackball in the corner of the keyboard to move the cursor around on the screen.
- Use the two buttons in the left corner the same way you use the left and right buttons on a mouse.

Setting up a telex call

Note The system must be configured and enabled before use. See *Before you start* on page 6.

Setting up the transmission mode

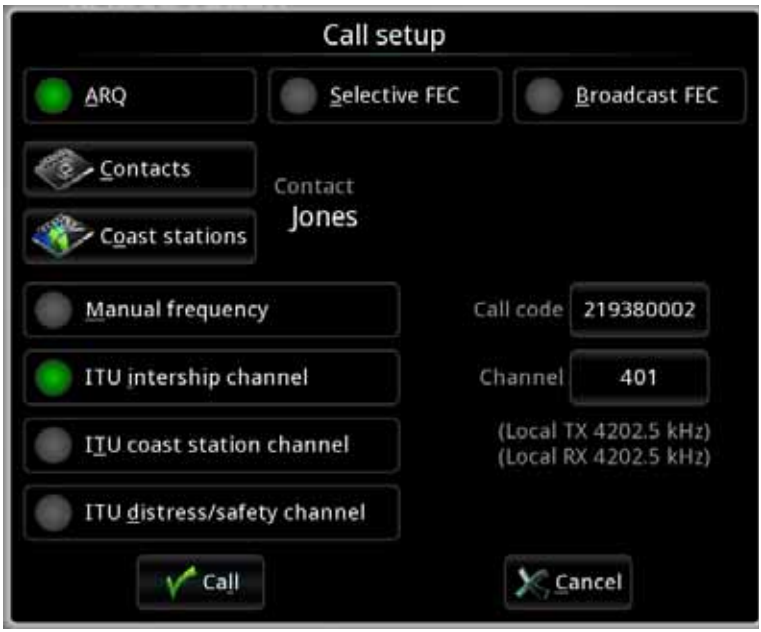
The Radiotelex system has three transmission modes:

- **ARQ** (Automatic Repetition reQuest): A mode where two stations can communicate without breaking the connection. The direction is changed with an “over” command.
- **Selective FEC** (Forward Error Correction): A one-way mode to one station.
- **Broadcast FEC**: A one-way mode broadcast to all stations. E.g. used in distress situations or for news or coast station traffic lists.

To set up the transmission mode, do as follows:

1. From the main menu, select **Call**.

> **Note** If Telex is not selected in the MF/HF radio you get a warning that the radio is occupied. Use the Mode button on the radio to switch to Telex.



2. Select **ARQ**, **Selective FEC** or **Broadcast FEC**.

Selecting the frequency for the call

You can select the frequency for your call in one of the following ways:

- **Manual frequency**: Allows you to type in the frequency in the Tx freq and Rx freq fields (Rx is only relevant for ARQ calls).

  When you select a coast station from the Coast stations list, the primary frequencies are listed, and you can select the frequency to use.

- **ITU intership channel:** Allows you to type in a channel number to use for ship-to-ship communication.
- **ITU coast station channel**: Allows you to type in a channel number to use for communication with a coast station.
- **ITU distress/safety channel:** Allows you to type in a channel number to use for distress or safety communication. If the entered channel is not a distress or safety channel, the display shows a warning.

  There are 6 dedicated distress frequencies for simplex FEC telex distress: **2174.5 kHz (Channel 1), 4177.5 kHz (Channel 411), 6268 kHz (Channel 611), 8376.5 kHz (Channel 801), 12520 kHz (Channel 1287) and 16695 kHz (Channel 1624).**

When selecting a channel number the corresponding frequency is automatically displayed.

Selecting the recipient for the call

Broadcast FECs are broadcast to all stations listening on the selected frequency, so you cannot specify recipients for broadcast calls.

For **ARQ** or **Selective FEC** you must specify the recipient for your telex.

- If the recipient is in the **Contacts** list, simply select the recipient from the list.
- If the recipient is in the **Coast stations** list, select the recipient and then select the frequency to use.
- If the recipient is not in any of the lists, type in the recipient's number in the Call code field. You can use either a 9-digit MMSI number or a 4-digit or 5-digit selective calling number.

Coast stations have either a 9-digit MMSI number starting with 00 or a 4-digit selective call (SelCall) number.

Ship contacts have either a 9-digit MMSI number or a 5-digit SelCall number.

Making a telex call

When you have set up telex mode, frequency/channel and recipient as described in the previous section, you are ready to make a call. Do as follows:

1. Select Call at the bottom of the **Call setup** window to start your telex session. The display shows that the radio is trying to connect.

2. When the connection is established, the telex page opens.

If you have selected Automatic identification (DE/WRU), your answer back string is automatically sent. For ARQ calls, the answer back string is followed by a WRU command requesting the recipient's answer back string. When the recipient has answered and has sent an Over command, you can start your message.

For a description of all the items at the bottom of the page, see *Options in the telex page* on page 20.

3. You can send text in the following two ways:
   - Type in your message directly in the text line at the bottom, using your connected keyboard or the on-screen keyboard, which is activated by pressing the text line on the screen and then the keyboard icon that appears in the right side of the text line.

   - Select **Options** > **Send file** and select the file you want to send.

Note

The system begins to transmit immediately when the file is selected. Pressing OVER while a file is being transferred does not result in a change of direction until the entire file is transmitted. To stop the transmission, select **Cancel file transfer**. Then use the OVER command to change the direction.

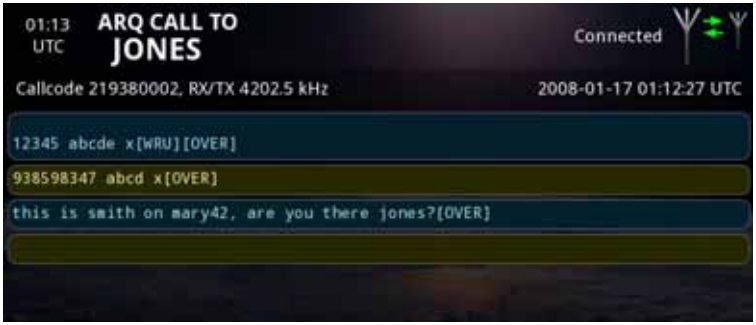
You can **combine the two methods** by adding text before or after the file contents, and type text at the bottom while the file is being transmitted.

If you transmitted a file and you do not want to add further text, skip the next step and go directly to step 5. For information on how to create a file for later transmission, see *Writing message files for telex* on page 23.

4. When you have finished your message, press **Enter** or select **Send** at the bottom of the page.

   The text is now transmitted. You can follow the progress on the screen - the inverted part of the text has not yet been transmitted.

5. For ARQ only: when you want the recipient to write back, select **Over** at the bottom of the page, or type **[OVER]** or **+?**.



The recipient can now type in a message for you. The message will appear in the field just below your message.

Note

If the remote station forces an OVER on your part while you are transmitting data, 1-2 characters may incorrectly be marked has having been sent while the remote station may not have received these characters. We do not recommend forcing a change of direction while the other station is sending data.

6. When the recipient has placed the [OVER] command too, you can type more text to continue the conversation.
7. To end the telex session, select **Break**. If you do not want to wait for exchange of DE/WRU, you can select **Break now!** in the popup that appears after Break is selected.

   The call is then disconnected. You can see all telex sessions initiated by you under **Sent Items** in the **Message** page. See *Viewing Sent items* on page 26.

Options in the telex page

Buttons

The table below shows the functions of the buttons that can appear at the bottom of the page:

Button	Function
	Transmits the text you have typed in the text line at the bottom.
	(ARQ only) Changes direction, so the recipient can write back. You cannot send any text after an Over command, until the direction is changed back to your side. However, if you send more text while the OVER command is waiting to be sent, the OVER is removed and replaced by your new text.
	Transmits your answer back string. The answer back string is stored in the MF/HF radio during installation, using the **Identification** window in the Message Terminal (System > Settings > Identification). In **Call settings** you can set up the system to automatically send DE/WRU (System > Settings > Call settings).

Button	Function
	(ARQ only) Inserts a WRU command (Who are you? - request for identification) in your text. This command is automatically followed by [OVER], so that the recipient can answer back. When the WRU command is sent, you cannot send any more text until the direction is changed back to your side. However, if you send more text while the WRU command is waiting to be sent, the WRU is removed and replaced by your new text. In the **Call settings** window you can set up the system to automatically send DE/WRU.
	Inserts a BELL command (can make e.g. a buzzer sound at the recipient).
	Opens the Options menu, described in the next section.
	Stops the communication link.

Options menu

To open the Options menu in the telex page, select **Options** at the bottom of the page.

You now have the following options:

- **Insert**
  - **Date & Time:** Inserts the current date and time (UTC format) in your message. The syntax of the Date and time is selected under **Settings > Date and Time format**.
  - **[OVER]:** Inserts an OVER command in your text, so that when you select **Send** or press **Enter**, your text is sent and the direction is changed to the recipient immediately after.
  - **[BREAK]:** Inserts a BREAK command in your text, so that when you select **Send** or press **Enter**, your text is sent and the communication is stopped immediately after.

- **Send file**

  Allows you to select a text file to send. For information on how to write and save the text file, see *Writing message files for telex* on page 23.
- **Print**

  Sends the text in the telex page to the printer.

Messages

Writing message files for telex

If you want to write longer messages, you can use the Message function.

To write a message, do as follows:

1. From the main menu, select **Message**.
2. Select **New** (if not already selected).

To make sure the text is properly formatted at the receiving end, we recommend starting the file with a few empty lines (press **Enter**).

3. You now have two options:
   - **Type in the text** using your keyboard or the on-screen keyboard in the top right corner. Note that you can only use telex characters.

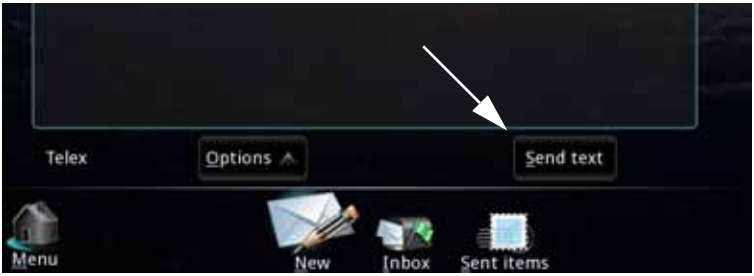
- **Load a file** by selecting **Options** > **Load** and select a file to load into the editor. You can then edit the text before you save it or send it. Note that you cannot load a file if it contains characters that are not telex characters.

Supported characters are: a b c d e f g h i j k l m n o p q r s t u v w x y z 0 1 2 3 4 5 6 7 8 9 - ? : ( ) . , ' = / +

4. When the message is complete, you can either send the message (skip the next steps and go directly to step 8) or save it for later use.
5. To save the message, select **Options > Save**. You can save it to the Message Terminal or to a USB memory stick.

6. Select **Print** if you want to print the message on your connected printer.
7. If you want to clear the editor and start a new message, select **New**.

8. To send the file as it is, select **Send text** at the bottom of the page.



The Call setup window opens. Setup and make the call as described in *Setting up a telex call* on page 13 and *Making a telex call* on page 16. When you make the telex call your message appears on screen and is transmitted.

Viewing the Inbox

To see the Inbox, select **Inbox** at the bottom of the **Message** page.

The Inbox page shows all telex messages sent to you and initiated by another station. It shows both single messages and ARQ conversations initiated by the other part.

Note The Inbox can hold 1000 messages. The oldest messages are deleted when this limit is exceeded.

Viewing Sent items

To see the Sent items, select **Sent items** at the bottom of the **Message** page. The Sent items page shows all telex communication initiated by you.

Note Sent items can hold 1000 messages. The oldest messages are deleted when this limit is exceeded.

Printing, saving or deleting messages

Use the tools symbol to print, delete or save messages. You can use the tools symbol from within a message or from the list of messages (Inbox or Sent items).

From within a message

To delete, print or save a message from within the message, do as follows:

1. Select the message you want to delete, save or print.
2. Select in the top right corner of the display.
3. Select **Delete**, **Print** or **Save**.

From the Inbox or Sent items

You can only print a message from within the message, as shown in the previous section.

To delete or save messages from the Inbox or Sent items, do as follows:

1. Click in the lower left corner of the display.
2. Select the messages you want to delete or save.
   You may use **Select all** to select all messages in the Inbox or Sent items, or **Clear all** to clear all selections.
3. Select **Delete** to delete the selected messages or **Save** to save the selected messages.

Receiving telex messages

The system can receive telex messages on all MF and HF telex frequencies, including NAVTEX messages at 490 kHz, 518 kHz and 4209.5 kHz.

Note

You can only receive telexes on frequencies that you are scanning. This means that the frequencies must be in the scan list, and a scanning must be started. See the next section for details.

Exception for DSC subsequent communication: The radio will automatically enable scanning on the correct frequency and only on that frequency. When the DSC session is ended, the scan list of the Message Terminal is used again.

When a telex is received on your Message Terminal, the procedure is:

1. A popup appears and the telex page opens, showing the incoming message.
2. If the call is an ARQ call, you can continue the communication as described in *Making a telex call* on page 16.

All received telex messages, whether they are ARQ telexes initiated by the other part or FEC telexes, are shown in the Inbox.

Scanning frequencies

When a scan is started, the system is ready to receive telex messages on the selected scan frequencies. The MF/HF radio scans every listed channel for 3 seconds. If no traffic is detected, it continues to the next channel.

The scan list in the SAILOR 6300 MF/HF Radiotelex always shows the current telex frequency of the connected MF/HF radio (indicated with "MF/HF radio frequency"). In addition, you can add other telex frequencies that you want the system to scan. See *Editing the scan list* on page 29.

Note If the system is in DSC subsequent communication mode, only the frequency assigned by the MF/HF radio is scanned.

To start a frequency scan, do as follows:

1. From the main menu, select **Scan**.

2. To scan the frequencies shown, select **Start scan**.

   The Message Terminal informs the MF/HF radio to scan for the selected frequencies. The status field in the top right corner shows Scanning.

3. To stop scanning, select **Stop scan**.

Editing the scan list

The MF/HF scanning frequency is automatically listed and can only be changed from the MF/HF radio.

You can add, change or delete additional scanning frequencies in the list.

Note Scanning on multiple frequencies is primarily intended for receiving ARQ calls. If many scan channels are specified you may not be able to receive all incoming FEC calls, because FEC uses a much shorter phasing sequence compared to ARQ.

To edit the scan list, do as follows:

1. At the bottom of the **SCAN LIST** page, select **Edit list**.

The list opens.

The green check marks show which frequencies are to be scanned.

2. To enable scanning of a frequency in the list, select the box next to the frequency.
3. Select **OK**.

To change or delete a frequency in the list

1. Open the scan list as shown above.
2. Select the frequency (not the box).
   The selected frequency is shown in the right side of the window.
3. To delete the frequency from the list, select **Delete**. Then select **Yes**.

4. To change the frequency, select **Edit**.

5. Type in the **Receive** and **Transmit** frequencies or select from the list of **Coast stations**.

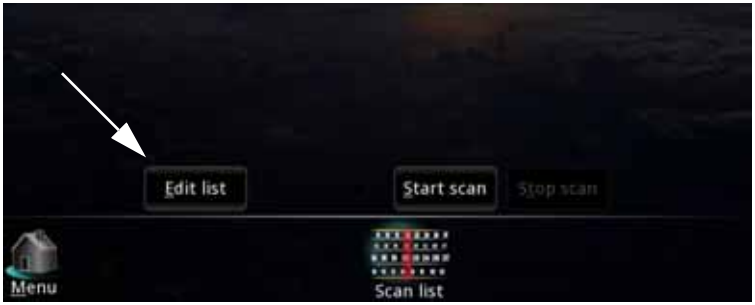
Note You must always type in both frequencies, even if you are only going to use the receive frequency. The transmit frequency is used to respond to incoming ARQ calls.

6. Select **OK**.

7. To stop editing the scan list, select **OK** again.

To add a frequency to the list

1. In the **SCAN LIST** page, select **Edit list**.



2. Select **New** at the bottom.

3. Type in the **Receive** and **Transmit** frequencies or select from the list of **Coast stations**.

   Note You must always enter a transmit frequency, even if it is not used (e.g. for NAVTEX, which is receive only). The transmit frequency must be within a valid maritime frequency band specified by ITU. The receive frequency must be between 490 and 27500 kHz.

4. Select **OK**.
5. To stop editing the scan list, select **OK** again.

Contacts - individual

The main Contacts page contains two lists: A Contacts list and a Coast station list.

To see your list of contacts, select **Contacts > Contacts** (may already be selected).

Adding a contact to the list

To add a new contact to the list, do as follows:

1. Select **New** at the bottom of the **CONTACTS** page.

2. Type in the name and MMSI or SelCall number of the contact.
3. Select **OK**.
   The new contact is now added to the list.

Editing a contact in the list

To edit a contact in the list, do as follows:

1. In the **CONTACTS** page, select the contact you want to edit.
2. Select **Edit** at the bottom of the **CONTACTS** page.

3. Change the name and/or MMSI or SelCall number of the contact.
4. Select **OK**.
   The contact is now changed in the list.

Contacts - Coast stations

The main Contacts page contains two lists: A Contacts list and a Coast station list.

To see your list of Coast stations, select **Contacts > Coast stations**.

Adding a coast station to the list

To add a new coast station to the list, do as follows:

1. Select **New** at the bottom of the **COAST STATIONS** page.

2. Type in the name of the coast station and the name of the country.
3. Type in the Call sign and the MMSI or SelCall number.
4. Select **OK**.

Editing a coast station in the list

To edit a coast station in the list, do as follows:

1. From the **COAST STATIONS** list, select the coast station you want to change.

2. Select **Edit** at the bottom of the **COAST STATIONS** page.

3. Change the information for the coast station.
4. Select **OK**.
   The list is now updated with the new information.

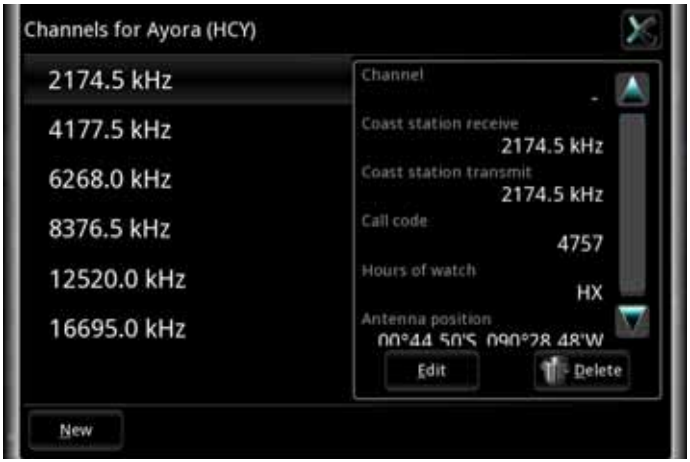
For information on how to edit the channels for a coast station, see the next section.

Viewing and editing the channels for a coast station

To view and edit the channels for a coast station, do as follows:

1. From the coast stations list, select the coast station you want to view.

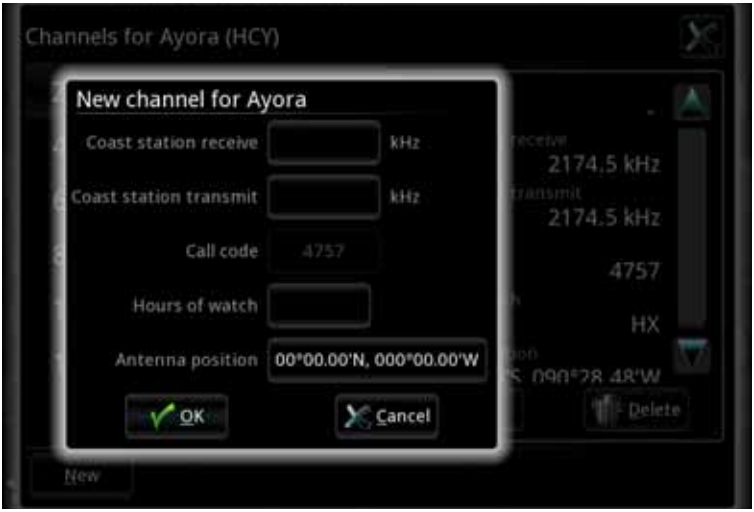
2. Select **Channels**.



3. To edit a channel, select the channel and then select **Edit**. Edit the channel and select **OK**.

4. To delete a channel, select the channel and then select **Delete** in the small window to the right.

5. To add a new channel, select **New** at the bottom of the page and enter the information for the new channel. Then select **OK**.



Contacts backup

You can export your contacts for later use or import contacts from a file.

To import or export your list of contacts, do as follows:

1. At the bottom of the Contacts page, select **Backup**.

2. Select **Import contacts** to import contacts from a file, or **Export contacts** to export your contacts to a file for later use.

   You can then browse for the location of the file.

System information

To see information on your system, select **System > About**.

This page shows serial number and software version of each unit. Select a unit to see more details.

System settings

To access the system settings, select **System** > **Settings**.

Select the settings you want to change in the SYSTEM SETTINGS page:

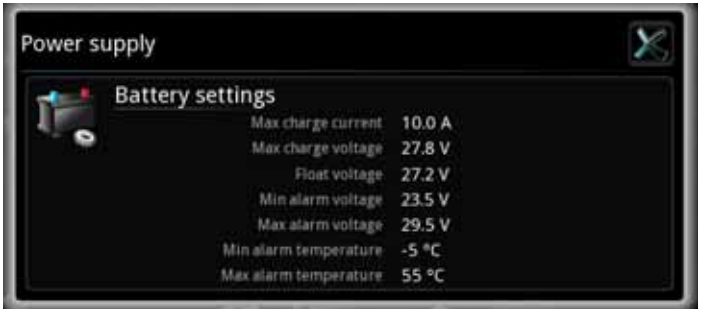
- Date and time format. Set up how date and time are displayed.
- Screen settings. Set the ambient light level for switching to night mode.
- Call settings. Automatic DE/WRU and slave delay (the slave delay of 10 ms is adequate for almost all scenarios).
- Identification. Configure call code and answer back string (DE). These settings require password and are normally set up during installation.

Power status

Note The Power status only shows information for the SAILOR 6081 PSU and charger. If you have a different power supply in your system, there is no information available.

1. To see the status of the power source, select **System** > **Power**.

2. To see the power settings, select **Settings...** in the lower right corner.


Power supply
Battery settings
Max charge current 10.0 A
Max charge voltage 27.8 V
Float voltage 27.2 V
Min alarm voltage 23.5 V
Max alarm voltage 29.5 V
Min alarm temperature -5 °C
Max alarm temperature 55 °C

Important

The default settings are suitable for most installations. Do not change these settings unless you have a special battery type or installation that requires different settings. Only skilled personnel should change the power settings.

For information on how to change the settings, refer to the installation manual for the MF/HF radio *[2]*.

Troubleshooting

This chapter gives guidelines for troubleshooting and provides an overview of the different means of status signaling. It has the following sections:

- *Getting support*
- *Generating a diagnostic report*
- *Troubleshooting guide*
- *Status signaling*

Getting support

If this manual does not provide the remedies to solve your problem, you may want to contact your local distributor.

A list of certified partners and distributors is available on Thrane & Thrane's web site: thrane.com. Select **Maritime** and select **Where to buy** from the top menu bar.

Generating a diagnostic report

To generate a diagnostic report, do as follows:

1. Select **System**.
2. Select **Advanced** at the bottom of the page.

3. Connect a USB memory stick to your Message Terminal.

> **Note** Do not save the file on the Message Terminal itself; the file format is not supported. Use a USB memory stick instead.

4. Select **Generate diagnostic report**.
5. Select **USB** and browse to the location where you want your diagnostics file.
6. Select **Save**.
7. Select **OK**.

Troubleshooting guide

The below table provides information on some of the problems that might occur, including possible causes and remedies to solve the problems.

Problem	Possible cause	Remedy
The system cannot be switched on	The Message Terminal has a remote on/off switch, so the power button is disabled.	If the Message Terminal is using a remote on/off switch, use that instead of the power button.
	There is no power on the input to the Message Terminal.	Check that all power cables between the ship power source and the Message Terminal are connected correctly, and that the power source is on.
No battery information in the Message Terminal	The Ethernet connection from the power supply is not working.	Check the Link activity indicator at the connection points in the Ethernet switch. Check that the Ethernet cables are connected correctly and are not damaged.
	The power supply is not a SAILOR 6081	None. Battery and power information is only shown if the power supply is a SAILOR 6081.
No connection between Message Terminal and printer	The USB cable is damaged or is not connected properly.	Check that the USB cable is connected correctly and is not damaged.

Problem	Possible cause	Remedy
No connection between Message Terminal and MF/HF radio	The CAN connection does not work.	Check that the CAN cables are connected correctly to the Message Terminal and the MF/HF radio, and that they are not damaged.
	The MF/HF radio is not switched on	Check that the MF/HF radio is switched on and ready.
	Other	Switch off the MF/HF radio and the Message Terminal and switch them back on.
The Message Terminal shows “out of paper” although there is paper in the printer.	The paper is not placed correctly in the printer.	Adjust the paper to the left side of the printer.

Status signaling

The Message Terminal can show basic status and error messages.

The upper right corner of the display shows the most important status information.

Information of events

Popup windows

When an event requires your attention, a popup window appears. When you have read the text, select **OK** or press **Esc** to close the window.

If the window indicates an error that requires your action, the warning or error icon will stay in the top right corner of the display as long as the problem persists.

If the system uses a SAILOR 6081 PSU and Charger, the Message Terminal also shows errors or warnings related to the power supply. For information on the SAILOR 6081, see the manual for the SAILOR 6081 *[4]*.

List of active warnings and errors

The top right corner of the display shows a short text about the current status. The icon in the corner can change depending on the situation. The following icons may show:

Antenna icon: The antenna icon can look different depending on the status. For details, see page 10 in *Overview of the Radiotelex user interface*.

Error.

Warning.

Select the icon or press F1 to see the list of active warnings and errors.

From the list of active warnings and errors you can access the event log.

Event log

From the list of active errors or warnings, you can select **Event log** to see a list of previous events. The list holds up to 100 events, including

- Errors
- Warnings
- Cleared warnings and errors.

A

ARQ — Automatic Repetition reQuest. An error-control method for data transmission that uses acknowledgements and timeouts to achieve reliable data transmission over an unreliable service. If the sender does not receive an acknowledgment before the timeout, it usually re-transmits the frame/packet until the sender receives an acknowledgment or exceeds a predefined number of re-transmissions.

C

CAN — Controller-Area Network. A message based protocol designed to allow microcontrollers and devices to communicate with each other within a vehicle without a host computer.

D

DE — A command used in a telex message to insert an answer-back string identifying the sender of the message. The string should normally contain the call sign.

DSC — Digital Selective Calling. Primarily intended to initiate ship-to-ship, ship-to-shore and shore-to-ship radiotelephone and MF/HF radiotelex calls. Each DSC-equipped ship, shore station and group is assigned a unique 9-digit Maritime Mobile Service Identity. DSC distress alerts, which consist of a preformatted distress message, are used to initiate emergency communication with ships and rescue coordination centers.

F

FEC — Forward Error Correction. A system of error control for data transmission, whereby the sender adds redundant data to its messages, also known as an error-correcting code. This allows

	the receiver to detect and correct errors without the need to ask the sender for additional data. The advantage of forward error correction is that a back-channel is not required.

G

GMDSS	Global Maritime Distress Safety System. The system is intended to perform the following functions: alerting (including position determination of the unit in distress), search and rescue coordination, locating (homing), maritime safety information broadcasts, general communication, and bridge-to-bridge communication.
GPL	General Public License
GPS	Global Positioning System. A system of satellites, computers, and receivers that is able to determine the latitude and longitude of a receiver on Earth by calculating the time difference for signals from different satellites to reach the receiver.

H

HF	High Frequency. The frequency band between 3 and 30 MHz. Used for medium and long range terrestrial radio communication.

I

ITU	International Telecommunication Union

L

LGPL	Lesser General Public License

M

MF	Medium Frequency. Radio frequencies (RF) in the range of 300 kHz to 3 MHz. Navtex, which is part of the current Global Maritime Distress Safety System occupies 518 kHz and 490 kHz for important digital text broadcasts.
MMSI	Maritime Mobile Service Identity. A series of nine digits which are sent in digital form over a radio frequency channel in order to uniquely identify ship stations, ship earth stations, coast stations, coast earth stations, and group calls. These identities are formed in such a way that the identity or part thereof can be used by telephone and telex subscribers connected to the general telecommunications network to call ships automatically.

N

NAVTEX	NAVigational TEleX. An international automated medium-frequency direct-printing service for delivery of navigational and meteorological warnings and forecasts, as well as urgent marine safety information to ships.

P

PIN	Personal Identification Number

T

TLX	TeLeprinter eXchange - also called telex.

U

USB	Universal Serial Bus. A specification to establish communication between devices and a host controller (usually personal computers). USB is intended to replace many varieties of serial

	and parallel ports. USB can connect computer peripherals such as mice, keyboards, digital cameras, printers, personal media players, flash drives, and external hard drives.
UTC	Universal Time, Coordinated. The International Atomic Time (TAI) with leap seconds added at irregular intervals to compensate for the Earth's slowing rotation. Leap seconds are used to allow UTC to closely track UT1, which is mean solar time at the Royal Observatory, Greenwich.

W

WRU	Who are you? A command used in a telex message to request an answer-back string (DE) from the recipient of the telex message.

A

alarm
  voltage level, 44
answer back string
  define, 43
  insert, 20

B

backup of contacts, 41
battery charge
  max. voltage and current, 44
battery status, 44
Bell button, 21
Break button, 21
buttons on screen during call, 20

C

call
  make a telex call, 16
  select frequency, 14
  select recipient, 15
  set up, 13
call code
  for own system, 43
characters supported for telex, 24
charge battery
  max. voltage and current, 44
coast station
  MMSI, 15
Contacts
  backup, 41
  importing and exporting, 41
Contacts, coast stations
  adding new, 37
  editing, 37
  editing channels, 39
Contacts, individual, 33
  adding new, 34
  editing, 35

D

date and time format, setting, 43
DE and WRU
  automatically insert, 43
DE button, 20
delete a message, 26
diagnostic report, 48
Distress
  cancel, 9
  send alert, 7
  telex subsequent communication, 8
document number, this manual, i
documents, related, v

E

error messages, 51

F

file, transmit, 22
float voltage, 44
frequency
  scan, 28
  select, 14

I

icons, 11
Identification, 43
identification request (WRU), 21
Inbox, 26
initial setup, 6
insert date and time, 22

M

manual
  document number, i
message
  delete, 26
  print, 26
  receive, 27
  save, 26
  write, 23
MMSI
  coast station, 15
  ship contact, 15

N

night mode, 43

O

options
  menu during call, 22
Over button, 20
overview
  system, 1
  user interface, 10

P

power
  alarm level, 44
  status, 44
power source, 44
prepare the system for telex, 6
print
  current page, 22
  message, 26

R

radiotelex overview, 2
receive telex, 27
recipient of call, 15
related manuals, v

S

safety summary, iv
save a message, 26
scan frequencies, 28
  add to list, 32
  edit list, 29
  start and stop, 28
Send button, 20
Sent items, 26
ship contact
  MMSI, 15
slave delay, 43
status, 11
system overview, 1
system settings, 43

T

telex
- enable in radio, 6
- make a call, 16
- receive, 27
- select frequency, 14
- select recipient, 15
- set up a call, 13
- subsequent communication for Distress, 8

time and date format, setting, 43
transmission modes for telex, 13
transmit a file, 22
troubleshooting, 49
typography used in this manual, vi

U

user interface, 3
- navigate, 12
- overview, 10

V

voltage alarm level, 44

W

warnings and error messages, 51
WRU button, 21

98-132519-B

info@thrane.com · thrane.com

Thrane & Thrane